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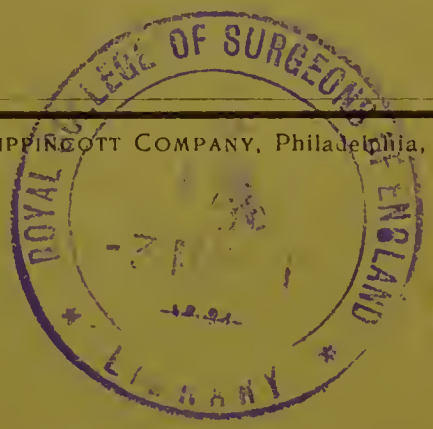

TWO STRANGE CASES OF FUNCTIONAL DISORDER, WITH REMARKS ON THE ASSOCIATION OF HYSTERIA AND MALINGERING

BY F. PARKES WEBER, M.A., M.D., F.R.C.P., Lond.
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FIRST CASE

The first patient, T. B., is a woman, now forty-one years old, with whose case I first became acquainted in January, 1890, when I was house-surgeon for the late Sir William Savory, at St. Bartholomew's Hospital, London. I happened to be on duty when she was brought to the hospital, and had her admitted as an in-patient. For permission to publish the case I am indebted to Sir A. A. Bowlby, who has enabled me to follow it up since then. I am likewise indebted for much information to Dr. W. W. Stabb, under whose care the patient was for a long time at a home in Torquay.

On admission to St. Bartholomew's Hospital, the patient, then nineteen years old, was fairly well-nourished, of medium size, with a rather asymmetrical face, and with slight spinal scoliosis. Since the age of ten years she had been subject to attacks of subcutaneous hemorrhage. These commenced in the right hand and recurred at irregular intervals, extending up the right forearm and arm. The affected arm was amputated above the elbow in 1888 (in the north of England), apparently on account of gangrene (or phlegmonous inflammation threatening gangrene), after several preliminary operations. Menstruation had commenced at fourteen years of age and had been regular since. For the last months the patient had suffered from severe attacks of vomiting, coming on at irregular intervals, irrespective of meals, but sometimes having relation to the menstrual periods. With these attacks large subcutaneous extravasations of blood, especially in the stump of the right arm and on the right side of the face (brow and forehead), were associated. In the hospital the parts affected by these hemorrhages looked shiny and purple, as if the skin were distended by a kind of acute hemorrhagic œdema

of the tissues below it. Between the attacks her general health was fair, but she seemed weak. The hemorrhage was not external, but into the subcutaneous tissue. There was never hæmoptysis, and blood was never passed from the bowel or kidneys. But once some dark blood was vomited, and Sir A. A. Bowlby tells me that at least on one occasion, when the mammary region was involved, some bloody fluid could be squeezed from the nipple. There was no evidence of any organic visceral disease. Typical attacks at St. Bartholomew's Hospital were as follows: "Malaise and headache—followed in one or two days by the appearance of hemorrhagic swellings in the subcutaneous tissues of various parts of the body. The patient becomes very much collapsed and vomits all food. Supposed hyperpyrexia. The hæmatomata gradually become absorbed and her general condition improves." Some of the swellings were aspirated and nothing but blood was drawn off. In December, 1891, a large swelling formed around the left knee; this swelling was incised and blood was let out; it then healed up. Incisions into the skin did not bleed more than in the case of healthy persons. There was no family history of hæmophilia or other hemorrhagic tendency. The urine, when examined, was apparently always free from albumin, sugar, and blood. During the latter part of her time at St. Bartholomew's Hospital the "attacks" seemed to have recurred somewhat less frequently than at first, but there was no very decided improvement.

On October 30, 1893, the patient was transferred from St. Bartholomew's Hospital to a home at Torquay. In the home the presence of some hysterical anæsthesia was noted, and the vomiting and abdominal pain (the pain had been complained of since 1891) were very troublesome. Gradually an improvement took place in regard to the attacks of vomiting and subcutaneous hemorrhages. Then these symptoms ceased altogether. The patient seemed, however, to have developed a tendency to malingering, and on one occasion she was discovered beating the stump of her right arm against something hard, apparently in order to produce an artificial "hemorrhagic attack"; she was likewise suspected of tampering with the thermometer so as to simulate fever. [It may be mentioned that "hyperpyrexia" had been noted at St. Bartholomew's Hospital, where apparently she began to "play tricks" with the thermometer, etc.]

I saw the patient again in 1905, a long time after the attacks of

subcutaneous blood-effusion or hemorrhagic œdema had ceased. She then had hysterical anæsthesia of the left lower extremity below the knee. There was some equinus contracture of both feet (especially on the right side), apparently resulting from hysterical paralysis and prolonged lying on her back. She was readmitted to St. Bartholomew's Hospital under Sir A. A. Bowlby, who succeeded in getting her on her feet again, by the help of a tenotomy and massage, with electrical treatment and mental encouragement. Since then I have seen her twice (the last time in November, 1910). She remains well and can help in house and domestic work.

A remarkable feature of this case was that the "swellings" were associated with subcutaneous extravasation of blood—a kind of acute circumscribed *hemorrhagic œdema.* I can find hardly any records at all of similar attacks of hemorrhagic œdema. Dr. Theodore Fisher, in the *Practitioner,*[1] described a case of "Recurrent Swelling of the Dorsum of the Hand Associated with the Appearance of Bruising." In that case swelling and bruising of the dorsum of the hand followed a blow with a wooden pointer by a somewhat irritated teacher, when the patient was about eleven and a half years old. Dr. Fisher first saw the child eighteen months later (July, 1898), when she was thirteen years old. The attacks of swelling, pain, and appearance of bruising were recurrent, lasting about three months or so and then disappearing and remaining absent for several months. In 1905 the patient was a tall, bright, intelligent young woman, twenty years of age, who had herself become a school-teacher. The swelling was still said to make its appearance two or three times a year. Dr. Fisher was likewise informed (by Mr. C. A. Morton) about a girl, aged twelve or thirteen years, who used to suffer from severe attacks of pain in one hand, followed by swelling and the appearance of bruising; the first attack had occurred immediately after a blow. Dr. Apert[2] speaks of a kind of recurrent hemorrhagic œdema (he terms it "œdème péliosique") in which the attacks are accompanied by pain and fever; the swollen area is pale at first, but by effusion of blood becomes red and afterward purple. In his cases there is no tendency for the mucous membranes to be involved (as there is in Quincke's acute angioneurotic œdema) and there is

[1] Theodore Fisher: *Practitioner,* London, 1906, lxxvii, 474.

[2] Société médicale des hôpitaux de Paris, séance de 9 Décembre, 1904.

no family history of any similar trouble. T. K. Monro and A. N. McGregor [3] have described a case, possibly allied to Apert's class. Their patient, a man, aged twenty-eight years, was subject to paroxysms of pain and hemorrhagic swellings in various parts of the body, but (unlike Apert's type) the mucous membranes were more or less involved.

In this connection it may be noted that bluish swellings associated with subcutaneous hemorrhage not rarely occur in some women from quite trivial injuries. Grasping their arms may give rise to bruise-like marks without hurting them. In certain cases temporarily resembling pernicious anæmia, blue marks due to subcutaneous hemorrhage may appear spontaneously on various parts of the body.

In connection with this subject it may be also worth mentioning that A. Hauptmann has described the case of a neurotic girl in whom hemorrhages under the skin and mucous membrane of the upper and lower lips recurred every month, apparently in connection with or supplying the place of the ordinary menstrual discharges.[4]

SECOND CASE

The second case has been more or less under observation for the last fifteen years. The patient, now aged thirty-seven years, was first admitted to the German Hospital, London, on October 19, 1896, and I then had the opportunity of occasionally seeing her. Since then she has been on various occasions an in-patient under my care or under my observation. By the kindness of my colleagues, Dr. Michels and the late Dr. Port, I was enabled to publish a short account of the case in 1898,[5] and in 1904 [6] I published a more detailed study on the whole subject.

According to the history obtained, the patient, who was twenty-two years old on admission in 1896, had been quite healthy up till

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[3] Monro and McGregor: *Lancet*, London, 1904, i, 1039.

[4] A. Hauptmann: "Vikariierende Menstruation in Form von Lippenblutungen," *Muenchener med. Wochenschrift*, 1911, lvi, 2114. On ecchymoses recurring in connection with the menstrual periods, see also P. Opel: *Dermatologische Zeitschrift*, Berlin, 1908, xv, 98; and B. Stiller: *Berliner klin. Wochenschrift*, 1877, xiv, 731.

[5] *St. Bartholomew's Hospital Reports*, 1898, xxxiv, 315.

[6] "Fecal Vomiting and Reversed Peristalsis in Functional Nervous Disease," *Brain*, London, 1904, xxvii, 170–198.

the time of her marriage in that year. On the night of her marriage her husband is said to have had hæmoptysis and to have died not long afterward. The commencement of her symptoms apparently dated from that time. The chief of these symptoms were the following: vomiting (sometimes bringing up a little blood), distention of the abdomen, and great constipation. There was no evidence that the idea of possible pregnancy had anything to do with the distention of the abdomen, which was afterward found to disappear at once under chloroform. The vomiting persisted on and off. At one time there was undoubtedly fecal vomiting. Actual scybala or formed fæces from the large intestine were certainly vomited on more than one occasion. At times, when an oil enema was administered, some of the oil reappeared in the vomit. In order to guard against imposture and to obtain an accurate diagnosis, an enema colored with methylene blue was administered at the suggestion of Dr. zum Busch. Some of the methylene blue appeared in the vomited matter within ten minutes after the administration of the enema. Any deception on the patient's part was altogether impossible.

This observation and the history of hæmatemesis seemed to furnish reasonable grounds for supposing that a fistulous communication between the colon and stomach or duodenum might exist. It may be noted, however, that when the gastric contents were evacuated by the siphon tube immediately after an enema containing methylene blue had been administered, no methylene blue was found to be present in the contents of the stomach. This showed that the methylene blue injected by the rectum took at least some minutes to reach the stomach. Furthermore, there was no extreme emaciation, and Bec,[7] who collected the records of sixty-two cases of gastrocolic fistula and found that the usual cause was cancer or ulcer of the stomach, mentions among the chief symptoms abundant diarrhœa, which was certainly not present in this case.[8] However, to make a long story

[7] Bec: Thèse de Lyon, 1897; quoted by H. D. Rolleston; *Practitioner*, London, 1899, lxiii, 199.

[8] Sometimes, however, gastrocolic fistula may be accompanied by constipation, as is shown by the experience of Brieger and Unruh, quoted by F. Perutz: "Zur Kenntniss der Magenkolonfisteln," *Med. Klinik*, Berlin, 1906, ii, 64. Perutz (*loc. cit.*) mentions another valuable diagnostic sign of gastrocolic fistula, namely, that fluid specially colored with methylene blue or eosin and poured into the stomach rapidly disappears and then reappears per rectum as a fluid motion of the particular color used.

short, it may be stated at once that during the patient's residence in the German Hospital two careful exploratory laparotomies were performed. At neither of them was any abnormal condition detected. The incision of one of the laparotomies was above the umbilicus, that of the other below. At the second operation the stomach itself was opened and explored. On both occasions the wound healed rapidly and no unsatisfactory results occurred. There may, indeed, have been some temporary improvement in the general condition following the operation. Any improvement there may have been was, however, certainly not permanent, and the patient's condition varied considerably at different times. While she was at the German Hospital her temperature was found every now and then to be apparently above the normal, especially when she was not being closely observed. It was not proved, however, that she simulated the fever by manipulating the thermometer. Before leaving the hospital (February 4, 1897) she looked well, had a fresh color, and moved about quickly, but was still troubled with vomiting, constipation, and distention of the abdomen.

Almost directly afterward she came under the care of Sir F. Treves at the London Hospital, and he has alluded to the case in his interesting paper on "Abdominal Section as a Medical Measure," read before the Medical Society of London on February 28, 1898.[9] At the London Hospital her symptoms were much the same as at the German Hospital, and a third laparotomy was performed, the contents of the abdomen being thoroughly explored, with a negative result. No evil results followed; on the contrary, the patient's condition afterward improved; but in September, 1898, she was again attending the out-patient department of the German Hospital for abdominal distention. It is interesting to note Sir F. Treves's confirmation of the vomiting of oil enemata, etc., while she was at the London Hospital. "An enema of castor oil was given; within ten minutes from the time of the introduction of this drug into the rectum, the whole of the castor oil, as demonstrated by actual measurement, was vomited from the mouth, together with a small scybalous mass. A few days later, in order to further test this phenomenon, an enema of one pint of water stained a deep color by methylene blue was injected into the rectum by the sister in the presence of the house

[9] *Transactions of the Medical Society of London*, 1898, xxi, 224.

surgeon. The whole of this enema, to the amount, that is, of one pint, was vomited by the mouth in ten minutes." At the London Hospital the patient admitted having endeavored to simulate hyperpyrexia by manipulating the thermometer.

In December, 1902, the patient was temporarily an in-patient under my care at the German Hospital for hysterical vomiting and "hysterical tympanites." As the abdomen and lower part of the thorax showed no respiratory movements, the tympanites seemed to be due to tonic contraction of the diaphragm combined with relaxation of the other abdominal muscles.[10] She at that time showed right-sided hemianæsthesia, hysterical contraction of the visual fields, and absence of pharyngeal reflex. She almost certainly tampered with the clinical thermometers, and one of them was broken on December 22, 1902. After that endeavors were made to prevent her simulating fever, and from that date till January 12, 1903, when she left the hospital, her temperature was never found to reach 100° F.

Afterward she was employed for a long time as cook at a boarding-house on the south coast of England, and apparently did her work well. But in the summer of 1908 she was supposed to have symptoms of gastric ulcer. In August, 1909, she was admitted to one of the large hospitals in London with a twelve months' history of vomiting, hæmatemesis, and pain. Her abdomen was extremely distended, and on August 25, 1909, a laparotomy (*the fourth laparotomy*) was performed as a supposed "urgency operation." The abdominal contents were thoroughly explored by one incision above and by another below the umbilicus. The gut was collapsed in places, but there was no obstruction, and no evidence of organic disease was detected (beyond the presence of scar-tissue resulting from previous operations). The wounds healed up well, but her condition remained unsatisfactory.

From December 31, 1909, to February 23, 1910, she was again an in-patient at the German Hospital. Her troubles were the usual abdominal distention, occasional vomiting, and pains, which she complained of in the abdomen and back. The vomit was found on one occasion to contain blood, which may have been swallowed with saliva from the mouth; on washing out the stomach no blood came

[10] Compare S. TALMA: *Berliner klin. Wochenschrift*, 1902, xxxix, 90.

away. By Röntgen ray examination of the abdomen after a bismuth meal (Dr. Dorner, February, 1910) the direction of the long axis of the stomach seemed to be somewhat abnormally vertical, suggesting that perhaps vomiting would be more easy for the patient than for ordinary individuals. In February, 1910, there was troublesome, though temporary, hysterical paresis of the left leg.

Since leaving the hospital, in February, 1910, up to the present time, she has frequently come up to the hospital as an out-patient. She says that, except once (doubtful), she has not menstruated since the last laparotomy, which was over two years ago. On the whole, she looks well and is well-nourished; the hysterical paresis of her leg has quite vanished. But for many months she has presented a bullous eruption on the front of the abdomen (and for some time also on the right leg), which is very resistant to treatment and is probably artificial in origin, due to some kind of irritation by the patient herself.* Recently she was obliged to look after an invalid mother, and this seemed to make her own mental condition more nearly normal. The mother suffered from pulmonary tuberculosis and diabetes mellitis (and died in September, 1911), and the patient herself has some impairment of resonance at the apex of one lung, but no signs of active tuberculosis.

In regard to this case, I cannot here enter into all the long and interesting literature of the subject, much of which I have elsewhere discussed.[11] From the results of many observations it appears that "fecal vomit" in organic obstruction of the bowel is seldom, if ever, more than "feculent"; that is to say, having the odor of fæces without containing obvious fecal masses. Vomiting of formed fæces, in the absence of gastrocolic fistula, practically only occurs in a very rare group of functional nervous cases, of which this case was an example. This may partly be accounted for by remembering that antiperistalsis, if it occurs at all, is likely to be more forcible when

* In December, 1911, after this was written, the bullous eruption in question was definitely ascertained to be due to the local use of cantharides powder by the patient herself. Dark specks were observed in the raised epidermis over some fresh bullæ on the abdomen. These dark specks were found by microscopic examination to contain minute glistening greenish particles similar to those seen in the powder obtained (for comparison) by crushing up a dried specimen of the blistering beetle, *Cantharis vesicatoria*.

[11] F. P. Weber: *Brain, loc. cit.*

the muscular walls of the gut have not been previously weakened by overdistention or gross organic disease. I believe that fecal vomiting of functional nervous origin is merely a rare and extremely exaggerated form of ordinary hysterical vomiting, just as typical so-called "hysterical tympanites" (more or less due to tonic contraction of the diaphragm) may perhaps be regarded as a minor stage of the functional condition leading to hysterical vomiting. The vomiting in functional brain disease may sometimes be more violent and severe than it ever is in organic cerebral disease, since fecal vomiting is scarcely known to occur in cases of cerebral tumor, etc. Some light is thrown on this point by remembering that a delusion is apt to be more stable and better "organized" in a paranoiac (monomaniac), whose brain, could it be examined, would probably show no obvious change, than in a general paralytic, whose brain is the site of grave histologic changes. I believe also that some cases of supposed ordinary hysterical vomiting ought really to be regarded as on the borderland between hysteria and simulation, and I will explain my reason for this belief. It is, of course, well known that just as some kinds of animals differ from other kinds by their facility for vomiting or the reverse, so in the human race some individuals vomit more easily than others. I do not know whether this tendency to easy vomiting ever runs in families like the facility for rumination (which I suppose may be regarded as an equivalent in the upper alimentary canal to antiperistalsis in the lower alimentary canal) certainly sometimes does. But, anyhow, there are some persons, especially young women, who, even while they are in their ordinary state of health and quite flourishing in appearance, have a really marvellous facility for vomiting. Not only does the slightest temporary gastric disturbance cause them to throw up their food, but they have only to look at certain articles of food and think of the associated smells and tastes (for which they happen to have an aversion) in order to be able to vomit. This facility for vomiting may obviously be cultivated by mental processes and may be made use of by hysterical patients who are desirous (as hysterical patients often are) of attracting attention to themselves by malingering if they cannot do so by other means. It must be distinguished from the vomiting which some simulators of nervous diseases can induce at will after distending their stomachs with fluid, just as German university

students can (or used to be able to) induce vomiting without any difficulty after having filled their stomachs with beer.

REMARKS ON THE ASSOCIATION OF HYSTERIA WITH MALINGERING

Both these strange cases present many other points of interest which I cannot here discuss. In both cases organic changes were to some extent associated with the functional nervous symptoms. In neither case, it should be noted, was any method of psychical analysis (Freud) resorted to. I shall confine my further remarks to the subject of the association of functional nervous (hysterical) symptoms with simulation, an association not rarely met with, and well illustrated by both the above cases. My explanation of this association has been already given in a paper entitled "On the Association of Hysteria with Malingering, and on the Phylogenetic Aspect of Hysteria in Pathological Exaggeration (or Disorder) of Tertiary (Nervous) Sex Characters,"[12] but of course it must likewise be remembered that in girls and young women of the lower classes who for any reason have been kept long in hospitals the temptation toward malingering may become very great. In hysterical subjects this temptation may become irresistible. They may naturally dread return to the hard and wearisome dull routine of daily work and to the struggle for life, a struggle for which they feel themselves less well equipped than others.

Hysteria was at one time, as the derivation of the word from the Greek ὑστέρα ("uterus") shows, regarded as a disorder connected with the female sexual organs, but the frequent occurrence of similar symptoms in the male (hysteria being sometimes as pronounced in males as in females) has long since proved that the idea of the exclusive connection of hysteria with the female sexual organs is absurd.

Sex characters may be divided into: (1) primary, those concerned with the sexual organs; (2) secondary, those concerned with the breasts, the facial hair, the features, the voice, the form of the skeleton, the development of the skeletal muscles and the general conformation; and (3) tertiary. Tertiary sex characters are those dependent on the nervous system, including both characters of instinct and char-

[12] Royal Society of Medicine (London), Medical Section, Proceedings for November, 1911.

acters of mind (reasoning). Such nervous characters, unlike primary sex characters, are not the exclusive property of either sex; they are called male or female characters merely accordingly as they predominate in one or the other sex. From the phylogenetic point of view I believe that hysteria, or rather much of what is now grouped together as hysteria, may be regarded as a pathological exaggeration (or disorder) of certain tertiary (nervous) female sex characters.

According to this (phylogenetic) conception the exaggeration (or disorder) of so-called tertiary female sex characters in the male would account for occasional cases of "male hysteria." I am not here concerned with the temporary "hysterical" conditions not rarely observed in the male as the result of violent emotions, starvation, and grave nutritive disturbance, or as forming a familiar part of the effect of certain toxic substances, such as alcohol.

The phylogenetic aspect of hysteria is, as far as I can see, not necessarily opposed to Pierre Janet's, Babinski's, and some other modern views on the subject.

I shall not trouble to bring forward any special evidence here to prove that ordinary hysterical symptoms are frequently associated in the same patient with attempts to simulate disease, accident, or injury and with deception of all kinds ("mythomania," etc.). The fairly frequent occurrence of such association is recognized by all—so much so, that in a recent paper on "Hysteria and Mythomania" Dupré and Logre quote Hartemberg as maintaining that hysteria (which Charcot called "*la grande simulatrice*") "*est d'essence mythopathique; elle peut se définer la mythomanie des syndromes.*" [13] Moreover, the frequent use of the term "hysterical malingering," or "hysterical simulation," proves that the occurrence of such associations is generally acknowledged. In fact, hysteria is frequently characterized by two kinds of simulation of disease, or "pathomimia," if I may be allowed to borrow a term suggested by Paul Bourget for his friend Dr. Dieulafoy, who employed it in a remarkable communication to the Paris Academy of Medicine in 1908: (1) The unconscious mimicry of disease, so well referred to in the writings of Charcot, Sir James Paget, etc., to which the term "neuromimesis" has been usually applied; and (2) the conscious, more or less

[13] Proceedings of the Twenty-first Congress of Alienists and Neurologists, 1911, *Presse Médicale*, Paris, August 12, 1911, 660.

voluntary, imitation of disease that may be termed "hysterical malingering."

I need simply explain my conception of hysteria and my view of the kind of simulation so frequently associated with it ("hysterical malingering") in order to show what I believe to be the pathological connection between the two, though it is possible that some of the multitudinous morbid phenomena which have been described by various authors as "hysterical" may find no place in my scheme. To avoid confusion I shall refer only to such universally recognized features or symptoms of hysteria as: (*a*) "functional" muscular paralyses and spasms and hysterical convulsions; (*b*) hysterical pains and paræsthesiæ (hysterical "clavus," "globus," etc.); (*c*) hysterical disorders of the circulatory system (hysterical palpitation, pulse-irregularity, and vasomotor disorders); (*d*) the well-known suggestibility of hysterical persons and loss of spontaneous will-power. I maintain that all these features or symptoms of hysteria can be explained as resulting from pathologic exaggeration (or disorder) of tertiary (nervous) female sex characters, characters which, in normal degree, might have been useful in regard to selection by the other sex.

Thus *a* and *b* may be regarded as exaggerations of the slight ailments to which the "weaker sex" are supposed to be naturally more liable than the "stronger sex" and which call for the sympathetic interest of the protecting males. Some at least of the hysterical symptoms grouped under *c* may be regarded as representing an exaggeration of the normal vasomotor excitability ("erethism" if more than normal) of young females (including facile blushing and responsive emotional changes in pulse frequency), which constitute part of their attractiveness to the other sex. So also *d* may be regarded as an exaggeration of the tendency of the female mind to bend to the opinion of (male) authority, a tendency which when recognized as present is (or, has been) often gratifying (flattering) to the male.

I now come to the question of "hysterical malingering" and all kinds of deception and simulation without any adequate rational cause. In past ages (from early prehistoric times onward) simulation or deception of various kinds must often have been serviceable to the weaker female in protecting herself from the stronger (and

sometimes cruel) male, as well as in enabling her sometimes to get her own way by "getting round" her male partner. By a natural process of "survival of the fittest" the facility for effective deception would, in a barbarous age, persist or gradually increase in the females, that is to say, it would become a tertiary sex character; and it must be recognized that the average female of the present day seems not to have altogether lost this in-born aptitude for deception.

Of course, deception and "tricks" of various kinds were also often useful to the male in his struggle for life, but they were more necessary to the female, and therefore at the present time the facility (instinct) for deception is probably greater in the average female than in the average male.

In both sexes this tendency to deceive is normally from an early age kept in check by the exercise of memory and reason, but in many hysterics the tendency in question is present in such an abnormal (pathologic) degree that it cannot be suppressed. Such persons practise simulation and deception of various kinds without any adequate (rational) grounds, and such "hysterical malingering," hysterical "mythomania," etc., may be justly regarded, I think, as an exaggeration (or disorder) of an instinct resulting by a process of survival of the fittest from the necessities of our primitive (especially female) ancestors. According to this view the greater frequency of such "hysterical malingering," "hysterical mythomania," etc., in women than in men is explained as a result of the fact that the tendency or facility (instinct) for deception is normally greater in women than in men.

From my point of view, therefore, the intimate relationship of deception (without adequate, rational motives) to hysteria is clear. I would, in short, claim that most (but not necessarily all) of the phenomena ordinarily classed under the heading "hysteria" are dependent on a special kind of instability of the nervous system, and may be regarded as the expression of a pathologic exaggeration or disorder of certain tertiary (nervous) sex characters the presence of which, in normal degree, can be accounted for on a phylogenetic or evolutionary basis.

Some at least of the normal tertiary sex characters are psychical and are due to hereditary functional properties of the higher central nervous system, functional properties which have gradually developed

as the result of sexual selection and the survival of the fittest in past ages. The tendency to simulation and deception (without adequate motive) characteristic of some hysterical subjects may be regarded as an exaggeration (or disorder) of an instinct which is normally greater in women than in men, the greater prominence in woman of the tendency or instinct to deceive constituting a normal psychical sex character. Such psychical sex characters, whether normal or hysterical (*i.e.*, exaggerated or disordered), are not acquired by means of memory and reason, but are inborn or developmental "instincts;" the term "instincts" being here applied to functional reactive properties of the higher, psychical portion of the central nervous system, reactive properties which have been acquired, not owing to repeated ancestral, voluntary, or rational efforts, but simply owing to the laws of evolution acting by the survival of the fittest.*

Like other instincts (for instance, the instinct of self-preservation) they may be to some extent controlled by the exercise of memory and reason, and, on the other hand, may be rendered conspicuous and dangerous to their possessor (or their possessor's neighbors) by influences such as mental and physical overwork and shocks, which weaken the normal rational action of the mind in its restraining influence over the instincts. The therapeutic preventive indications are therefore largely educational, but prevention in such matters can obviously only be rendered really effectual by means of sexual selection and eugenics; in fact, just as sexual selection in the past is responsible for the existence of the tertiary (nervous) sex characters and their abnormal variations of the present day, so sexual selection in the present and future will modify the nervous sex characters, as well as all other instinctive nervous tendencies, of future generations.

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* So, also, the protective nervous instinct which causes some insects to appear dead (or, as one incorrectly says, "sham death") when in the presence of animals who prey on them (but refuse to eat their dead bodies) develops, by the laws of evolution, as a result of the "survival of the fittest," just as "protective mimicry" does, owing to which some butterflies and insects have come, when resting, to resemble leaves of plants or twigs, etc.